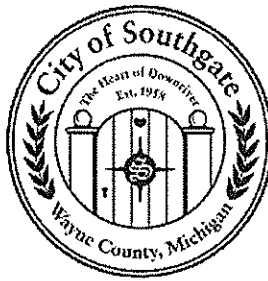


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City of Southgate

ATTENTION:

THIS IS AN IMPORTANT REPORT ON WATER QUALITY AND SAFETY

The Southgate Water Department is proud of our long history of providing quality drinking water to our customers and is honored to provide this report to you. The 2023 Consumers Annual Report on Water Quality shows the sources of our water, lists the results of our tests, and contains important information about water and health. The Southgate Water Department will notify you immediately if there is ever any reason for concern about our water. We are pleased to show you that the water we purchase from the Great Lakes Water Authority (GLWA), has surpassed water quality standards as mandated by the United States Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Great Lakes and Energy (EGLE). Drinking water quality is important to our community and the region. The Southgate Water Department and the GLWA are committed to meeting state and federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. This year's Water Quality Report highlights the performance of GLWA and the Southgate Water Department professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

ABOUT OUR SYSTEM

The Southgate Water Department provides water to approximately 30,000 residents, 10,000 homes, and over 2,000 businesses, schools, churches, apartment complexes and numerous guests and visitors. The Southgate Water Department also maintains over 100 miles of water main and approximately 1,300 fire hydrants. The Southwest Water Treatment Plant, owned and operated by the Great Lakes Water Authority (GLWA), is Southgate's major supplier of water. The Southwest Water Treatment Plant receives water from the Detroit River where underground pipes carry the water for treatment. The many miles of deep raw water tunnels are periodically inspected either by hard-hat divers or with cameras for structural integrity and zebra mussel infestation. The City of Southgate and the Great Lakes Water Authority (GLWA) are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. If you would like to know more about this report or have any questions or concerns about your water, please contact the Southgate Water Department at (734) 258-3074.

Safe drinking water is a shared responsibility. The water that Great Lakes Water Authority (GLWA) delivers to our community does not contain lead. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines. Corrosion control reduces the risk of lead and copper from leaching into your water. Orthophosphates are added during the treatment process as a corrosion control method to create a protective coating in service pipes throughout the system including in your home or business. The City of Southgate performs required lead and copper sampling and testing in our community. Water consumers also have a responsibility to maintain the plumbing in their homes and businesses, and can take steps to limit their exposure to lead.

NATIONAL PRIMARY DRINKING WATER REGULATIONS COMPLIANCE

In 2023, the Southgate Water Department had zero (0) monitoring and zero (0) maximum contaminant level violations and did not exceed any health standards.

In 2023, the Southgate Water Department had zero (0) monitoring violations of fecal coliform. The regulation requires confirmation of any positive result and that location and all points surrounding to be re-sampled within 24 hours of notification or the next business day.

The Environmental Protection Agency (EPA) required the City of Southgate to sample water for Unregulated Contaminant Monitoring Rule (UCMR) between the years of 2017-2020. The City of Southgate had no detectable contaminants during this period.

“Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public human health.”

“Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).”

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Southgate is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you have a service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. If you are concerned about lead in your water, you may wish

to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Infants and children who drink water containing lead could experience delays in their physical and mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

The City of Southgate has a total of 10,895 water service lines. Of these water service lines, 95 are lead, 16 are galvanized 10,099 are other materials (copper, plastic or cast iron) and 685 are of unknown material at this time. The City of Southgate is actively inspecting the water service lines of unknown material and began replacing known lead lines in the summer of 2021.

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, watersheds in the U.S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of the GLWA's Detroit River source water for potential contamination. The susceptibility rating is on a seven-tiered scale and ranges from very low to very high determined primarily using geologic sensitivity, water chemistry, and potential contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA Southwest water treatment plants that draws water from Detroit River have historically provided satisfactory treatment and meet drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. GLWA has an updated Surface Water Intake Protection plan for the Fighting Island Intake. The plan has seven elements that include: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new sources, public participation and public education activities. If you would like to know more information about the Source Water Assessment report, please contact GLWA at (313) 926-8102.

2023 Southwest Mineral Analysis

Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	1.80	0.01	0.22
Total Solids	ppm	174	120	139
Total Dissolved Solids	ppm	165	97	127
Aluminum	ppm	0.084	0.021	0.045
Iron	ppm	0.5	0.2	0.3
Copper	ppm	0.001	ND	0.001
Magnesium	ppm	8.8	7.4	7.9
Calcium	ppm	33.3	25.2	27.4
Sodium	ppm	9.4	4.7	5.6
Potassium	ppm	1.3	0.9	1.1
Manganese	ppm	0.002	ND	0.000
Lead	ppm	ND	ND	0.000
Zinc	ppm	0.002	ND	0.000
Silica	ppm	2.7	1.3	2.0
Sulfate	ppm	36	23.4	26.3
Chloride	ppm	14.5	7.5	10.3
Phosphorus	ppm	0.73	0.41	0.52

Parameter	Units	Max.	Min.	Avg.
Free Carbon Dioxide	ppm	13.9	6.0	9.5
Total Hardness	ppm	166	103	120
Total Alkalinity	ppm	94	70	80
Carbonate Alkalinity	ppm	0	0	0
Bi-Carbonate Alkalinity	ppm	94	70	80
Non-Carbonate Hardness	ppm	72	19	41
Chemical Oxygen Demand	ppm	11.7	2.0	4.4
Dissolved Oxygen	ppm	14.9	8.0	10.5
Nitrite Nitrogen	ppm	ND	ND	0
Nitrate Nitrogen	ppm	1.47	0.29	0.50
Fluoride	ppm	0.84	0.10	0.62
pH		7.37	7.05	7.23
Specific Conductance @25 °C	µohms	297	182	213
Temperature	°C	23.2	2.3	12.6

**Southwest Water Treatment Plant
2023 Regulated Detected Contaminants Tables**

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	04/11/2023	ppm	4	4	0.46	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04/11/2023	ppm	10	10	0.63	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2023	ppb	n/a	80	31	12-31	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2023	ppb	n/a	60	20	7.2-20	no	By-product of drinking water disinfection.

Disinfection Residual – Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	2023	ppm	4	4	0.69	0.55-0.77	no	Water additive used to control microbes.

2023 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.09 NTU	100%	no	Soil Runoff

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

2023 Lead and Copper Monitoring at Customer's Tap in 2022								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Range of Individual Samples Results	Typical Sources in Drinking Water
Lead	2023	ppb	0	15	6.0	2	0.0 – 17.0	Lead services lines, corrosion of household plumbing including fittings & fixtures; erosion of natural deposits.
Copper	2023	ppm	1.3	1.3	0.2	0	0.0 – 0.2	Corrosion of household plumbing system; Erosion of natural deposits.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC is measured each quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

2023 Special Monitoring								
Regulated Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Violation yes/no	Source of Contaminant	
Sodium	4/11/23	ppm	n/a	n/a	6.3	no	Erosion of natural deposits	

2019 Unregulated Contaminants – Monitored at the Plant Finished Tap								
Unregulated Contaminant	Test Date	Unit	Highest Level of Detection	SMLC	Range of Detection	Noticeable Effect Above the SMLC	Source of Contaminant	
Manganese	2019	Ppb	0.48	50	0.0-0.48	Black to brown color; black staining; bitter metallic taste	Erosion of natural deposits and corrosion of iron pipes	

These tables are based on tests conducted by GLWA in the year 2023 or the most recent testing done within the last five calendar years. GLWA conducts test throughout the year, only tests that show the presence of a substance or require special monitoring are presented in these tables. The state allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The data is representative of the water quality, but some are more than one year old.

2023 Key to the Detected Contaminant Tables

Symbol	Abbreviation for	Definition/Explanation
>	Greater than	
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, di-bromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our system.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity.
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	The average of analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
µmhos	Micromhos	Measure of electrical conductance of water
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
ND	Not Detected	

The Southgate Water Board conducts meetings on a quarterly basis that are open to the public. For more information, call (734) 258-3074.

Odd / Even Outdoor Watering Schedule – 2024

There is a mandatory Odd/Even Watering Schedule in effect from: May 19 – September 8, 2024
Residents with an address ending in an even number would be permitted to water their lawns on even-numbered calendar dates.

If your address ends with: 0 or 2 or 4 or 6 or 8	You may use water outdoors on calendar dates ending in: 0, 2, 4, 6, 8
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Residents with an address ending in an odd number would be permitted to water their lawns on odd-numbered calendar dates.

If your address ends with: 1 or 3 or 5 or 7 or 9	You may use water outdoors on calendar dates ending in: 1, 3, 5, 7, 9
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Compliance with this watering schedule will be enforced.